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NOTICE OF ALLOWANCE AND FEE(S) DUE

466 7590 12/15/2009

YOUNG & THOMPSON
209 Madison Street
Suite 500
Alexandria, VA 22314

EXAMINER

LAM, DUNG LE

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 12/15/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,545

07/22/2003

Kenichi Ishii

8001-1397

4870

TITLE OF INVENTION: LOCATION SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/15/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

466 7590 12/15/2009

YOUNG & THOMPSON
209 Madison Street
Suite 500
Alexandria, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,545 07/22/2003 Kenichi Ishii 8001-1397 4870

TITLE OF INVENTION: LOCATION SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$300 \$0 \$1810 03/15/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
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LAM, DUNG LE 2617 455-456200

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/623,545	07/22/2003	Kenichi Ishii	8001-1397	4870
466	7590	12/15/2009	EXAMINER	
YOUNG & THOMPSON 209 Madison Street Suite 500 Alexandria, VA 22314			LAM, DUNG LE	
			ART UNIT	PAPER NUMBER
			2617	
			DATE MAILED: 12/15/2009	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 15 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 15 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/623,545	ISHII, KENICHI	
	Examiner	Art Unit	
	DUNG LAM	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/23/09.
2. ☒ The allowed claim(s) is/are 100,101,103,105,106,108,110,111,113 and 115-135.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/AJIT PATEL/
Primary Examiner, Art Unit 2617

Allowable Subject Matter

Claims 100, 101, 103, 105, 106, 108, 110, 111, 113, 115-135 allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record, **3GPP171** (**3GPP TS23.171** Functional Stage 2 description of Location services in UMTS, version 3.8.0) teaches a location system that performs a first privacy check, **Havanis** (US Pub. No.6,195,557) teaches the GMLC performs a second privacy check. **Nowak** (US Pub. No.6968195) teaches the concept of not only specifying the accuracy as a QoS parameter of a location request but also the allowable age. However, **3GPP171** in view of **Havanis** further in view of **Nowak** fail to teach all of the combined features of

100. A location service system for locating a target mobile terminal, comprising:
a client terminal which transmits a location request specifying the target mobile terminal, and requested accuracy and requested allowable age;

a positioning system which produces location information of
the target mobile terminal;

and a gateway which transmits the location request to said positioning system and stores previously obtained location information of the target mobile terminal and a privacy profile of the target mobile terminal, wherein the gateway performs a first privacy check for verifying the location request by referring to the privacy profile of the target mobile terminal, performs a reusability check to determine if the stored, previously

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obtained, location information satisfies the requested accuracy and the requested allowable age specified in said verified location request, and if the reusability check is affirmative, then performs a second privacy check on the stored, previously obtained, location information by referring to information specified in the location request based on the privacy profile of the target mobile terminal, without transmitting the verified location request to the positioning system, in order to decide whether said gateway can transmit the stored, previously obtained, location information to the client terminal.

105. A location method of a location service system for locating a target mobile terminal, wherein a positioning system for producing location information of the target mobile terminal in response to a request from a gateway is provided, the method comprising:

transmitting, at a client terminal, a location request specifying the target mobile terminal, requested accuracy and requested allowable age;

performing, at the gateway which stores previously obtained location information of the target mobile terminal and a privacy profile of the target mobile terminal, a first privacy check for verifying the location request from the client terminal by referring to the privacy profile of the target mobile terminal;

performing, at the gateway, a reusability check to determine if the stored, previously obtained, location information satisfies the requested accuracy and the requested allowable age specified in said verified location request;

and performing, at the gateway, a second privacy check on said stored, previously obtained, location information by referring to information specified in the verified location request in order to decide whether the gateway can transmit the stored, previously obtained, location information to the client terminal without transmitting the verified location request to the positioning system if said reusability check is affirmative.

110. A gateway of a location service system for locating a target mobile terminal, wherein a positioning system for producing location information of the target mobile terminal is provided, the gateway comprising:

storage means for storing previously obtained location information of the target mobile terminal from the positioning system and a privacy profile of the target mobile terminal;[[,]]

first privacy check means for verifying [[the]] location request specifying the target mobile terminal, requested accuracy, and requested allowable age from [[the]] a client terminal by referring to the privacy profile of the target mobile terminal stored in the storage means;[[,]]

reusability check means for determining if the stored, previously obtained, location information stored in the storage means satisfies the requested accuracy and the requested allowable age specified in the verified location request;[[,]] and

second privacy check means for performing, if the reusability check is affirmative, a second privacy check on said stored, previously obtained, location information stored

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in the storage means by referring to information specified in the location request, without transmitting the verified location request to the positioning system, in order to decide whether the stored, previously obtained, location information stored in the storage means can be transmitted to the client terminal.

115. A location service system for locating a target mobile terminal, comprising:

a plurality of client terminals which transmit a location request specifying the target mobile terminal, and accuracy and allowable age of stored location information;

a positioning system which produces location information of the target mobile terminal; and

a gateway which stores a privacy profile of the target mobile terminal and location information of the target mobile terminal previously obtained from said positioning system as a result of the gateway transmitting thereto an initial location request from one of said client terminals,

wherein the gateway performs a first privacy check for verifying a current location request from any of said client terminals by referring to the privacy profile of the target mobile terminal, performs a reusability check to determine if the stored previously obtained, location information satisfies the accuracy and allowable age specified in said verified current location request, and if the reusability check is affirmative, then performs a second privacy check to determine if the stored previously obtained, location information further satisfies a condition specified by said target mobile terminal in the

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privacy profile and transmits the stored, previously obtained, location information to the requesting client terminal if the second privacy check is affirmative.

122. A location method of a location service system for locating a target mobile terminal, comprising the steps of:

a) transmitting, from one of a plurality of client terminals, a location request specifying the target mobile terminal;

b) transmitting, from a gateway, an initial location request from one of said client terminals to a positioning system to obtain current location information of the target mobile terminal and storing the current location information as previously obtained location information of the target mobile terminal;

c) transmitting, from any of said client terminals, a current location request specifying the target mobile terminal, and accuracy and allowable age of stored location information;

d) storing at the gateway the previously obtained location information and a privacy profile of the target mobile terminal, and performing, at said gateway, a first privacy check for verifying said current location request by referring to the privacy profile of the target mobile terminal;

e) performing, at the gateway, a reusability check to determine whether the stored, previously obtained, location information satisfies the accuracy and allowable age specified in said verified current location request; and

f) if the reusability check is affirmative, performing, at said gateway, a second privacy check by referring to the information specified in the verified location request to determine whether the stored location information satisfies a condition specified by said target mobile terminal and transmitting the stored location information to the requesting client terminal if the second privacy check is affirmative.

129. A gateway of a location service system for locating a target mobile terminal, wherein the location service system comprises:

a plurality of client terminals which transmit a location request specifying the target mobile terminal, and accuracy and allowable age of stored location information; and a positioning system which produces location information of the target mobile terminal,

wherein said gateway stores a privacy profile of the target mobile terminal and location information of the target mobile terminal previously obtained from said positioning system as a result of the gateway transmitting an initial location request from one of said client terminals to said positioning system, performs a first privacy check for verifying a current location request from any of said client terminals by referring to the privacy profile of the target mobile terminal, performs a reusability check to determine if the stored location information satisfies the accuracy and allowable age specified in said verified current location request, and if the reusability check is affirmative, then performs a second privacy check to determine if the stored, previously obtained, location information further satisfies a condition specified by said target mobile

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terminal in the privacy profile and transmits the stored location information to the requesting client terminal if the second privacy check is affirmative.

Thus the cited prior art alone or in combination does not fairly suggest or disclose the claimed combination of features.

/AJIT PATEL/

Primary Examiner, Art Unit 2617